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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/066,408 | 01/30/2002 | Eric T. Easterbrook | SII-2627-U-C5 | 3734 |

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EXAMINER

CRANE, DANIEL C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3725

DATE MAILED: 06/02/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,408

Applicant(s)

EASTERBROOK, ERIC T.

Examiner

Daniel C Crane

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-35, 46-53, 57-73 and 76 is/are allowed.
- 6) ☒ Claim(s) 1-30, 36-45, 54-56, 74, 75 and 77-80 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

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COMMENT

It is noted that applicant has filed claims that are duplicative of previously patented claims. Applicant is required to review the present claims under consideration to preclude the claiming of the same inventions and to eliminate any conflicting claimed subject matter from those filed in applicant's pending applications and applications now patented. A clear line of demarcation must be maintained between applicant's pending application and applicant's previously filed applications and patents.

BASIS FOR DOUBLE PATENTING REJECTION

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

REJECTION OF CLAIMS ON DOUBLE PATENTING

Claims 1-24, 79 and 80 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,230,537.

Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to the skilled artisan at the time of the invention to have

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provided the patented tooling that merely provides a non-uniform pressure profile. Accordingly, it would have been obvious to have provided a profile on the tool and in the joint that has a general profile that can impact the workpiece sufficient enough to provide a pressure profile to the workpiece, thus, simplifying the construction of the tooling. Furthermore, it would have been obvious to the skilled artisan to have varied the configuration of the contacting end of the shaped indenter to have varied within a range of parameters without changing the overall configuration of the contact end of the indenter. Similarly, the extent of the uniform pressure profile would have been obvious to the skilled artisan when familiar with the claimed joint manufacture method. Clearly, the skilled artisan aware of the method of claim 16 would have been disposed to effect the compressing to an extent that the entire length of the sidewall of the opening is impacted so that the fatigue life of the opening is increased throughout its length. The use of lubricants is well known in this art to facilitate the shaping operation without damaging the surfaces of the work. Accordingly, such a provision within the claimed features would have been obvious for the noted motivation.

Claim 36, 39, 41, 42, 43, 44 and 45 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 21, 24, 26, 27, 28, 29, 30 of prior U.S. Patent No. 6,389,865. This is a double patenting rejection.

Claims 37, 38 and 40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22, 23 of U.S. Patent No. 6,389,865). Although the conflicting claims are not identical, they are not patentably distinct from each other

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because it would have been obvious to the skilled artisan having the benefit of the claimed tooling by operating the first and second indenter to an extent that no stress-wave is produced in the workpiece. Accordingly, the elimination of the stress-waves in the apparatus would have been obvious to the skilled artisan having the benefit of the claimed embodiment.

Claims 77 and 78 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 21 of U.S. Patent No. 6,389,865) in view of Wong (Canadian document no. 2,121,120). Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to the skilled artisan at the time of the invention to have modified the patented claim by further providing a centering punch as shown by Wong at 17 so as to facilitate centering of the indenter relative to the indenting location.

BASIS FOR REJECTIONS

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

REJECTION OF CLAIMS OVER PRIOR ART

Claims 25, 26, 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanna (2,810,191). Attention is directed to Figures 4-10 where the method of indenting the workpiece 20 is indented by indenters 25 or 30 so as to improve the fatigue life of the holes 25, 35, 36. Additionally, since Hanna is concerned with maintaining the stress concentrations within the indented metal plate as low as possible (see column 3, lines 13-18), it is clearly inherent that the beneficial residual stress profile is obtained (see Figure 3). Furthermore, the deformation of the workpiece by the indenters strengthen the metal plate, improve the fatigue strength and produce a stress pattern (see the paragraph bridging columns 3 and 4) such that the net result is a beneficial residual stress profile. The indenter can move, therefore, it is "dynamic". An anvil is clearly provided to support the member.

Claims 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong (Canadian document no. 2,121,120). See Figure 17 and page 6, lines 1-3, and page 9, lines 22-27, where the indented member 10 (Figures 1-5) is provided with a compressive residual stress. The deformation of the workpiece by the indenters strengthen the metal plate, improve the fatigue strength and produce residual stress (see page 10, lines 18-22) such that the net result is a

beneficial residual stress profile. Centering is shown at 17. Since the indenters have degrees of motion they are "dynamic".

Claims 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Salter (3,270,410). See Figures 4 and 5 where the residual compressive stresses of the first and second fastener aperture of first and second members 10 and 12, respectively, is imparted to the shank 34 of the fastener 30.

Claims 54 and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Cox (5,059,059). See Figure 8 where the holes of plates 10 and 2 are increased by mandrel 24, which results in the formation of residual compressive stresses, followed by the insertion of interference fit fastener 32. See Figure 13 where the fastener 32 is shown to be countersunk.

Claim 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (5,059,059). The use of rivets is common in this art. Accordingly, the use of a rivet to join the two plates would have been obvious in light of the showing by Cox so as to simplify the joining operation so as to easily attach plates together by readily available riveting

Claims 74 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (Canadian document no. 2,121,120). The claimed method is taught by Wong where an indenter is positioned at a pre-selected position on the workpiece 10, indented by opposed indenter mandrels 12 followed by the step of removing from the body of the workpiece a selected portion

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of the workpiece indented by the workpiece. Wong does not indicate that a "slot" may be worked about it bounding portion. However, it is maintained that the skilled artisan would have recognized this in light of Wong's disclosure at page 4, fourth paragraph. Since Wong recognizes that the mandrels 12 may be of any shape "square, hexagonal, round...", it clearly evident that it would have been obvious to the skilled artisan to have performed the process on a slot so as to improve the fatigue life of the product. The particular use of the product is considered a matter of choice.

INDICATION OF ALLOWABLE SUBJECT MATTER

Claims 31-35, 46-53, 57-73 and 76 are allowed.

PRIOR ART CITED BY EXAMINER

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

RESPONSE BY APPLICANT(S)

Applicant(s) response to be fully responsive and to provide for a clear record must specifically point out how the language of the claims patentably distinguishes them from the references, both those references applied in the objections and rejections and those references cited in view of the state of the art in accordance with 37 CFR 1.111 (a), (b) and (c).

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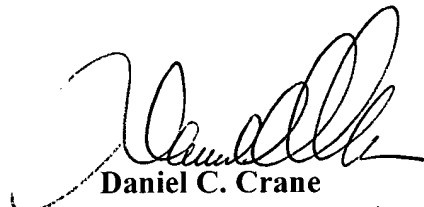
INQUIRIES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is **(703) 308-1870**. The examiner's office hours are 6:30AM-5:00PM, Tuesday through Friday. The examiner's supervisor, Mr. Allen Ostrager, can be reached at **(703) 308-3136**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(703) 308-1148**.

Documents related to the instant application may be submitted directly to Group 3700 by facsimile transmission at all times. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Group 3725 Facsimile Center number is **(703) 305-3579**.

DCCrane
May 29, 2003



Daniel C. Crane
Primary Patent Examiner
Group Art Unit 3725